# THE SOCIAL VALIDITY OF SCHOOLWIDE POSITIVE BEHAVIOR SUPPORTS IN UTAH SCHOOLS: A STUDENT PERSPECTIVE

by

Christian Vance Sabey

A thesis submitted to the faculty of
The University of Utah
in partial fulfillment of the requirements for the degree of

Master of Science

Department of Educational Psychology

The University of Utah

May 2011

**The University of Utah Graduate School**

## STATEMENT OF THESIS APPROVAL

The thesis of **Christian Sabey**

has been approved by the following supervisory committee members:

| | | |
|---|---|---|
| **Daniel Olympia** | , Chair | **11/22/2010** Date Approved |
| **Lora Tuesday-Heathfield** | , Member | **11/22/2010** Date Approved |
| **Kristin Swenson** | , Member | **11/22/2010** Date Approved |

and by **Elaine Clark** , Chair of

the Department of **Educational Psychology**

and by Charles A. Wight, Dean of The Graduate School.

# ABSTRACT

Schoolwide Positive Behavior and Supports (SWPBS) are being used in thousands of schools throughout the United States with many positive results, including decreased office discipline referrals and increased teaching time. While many of the benefits of SWPBS have been demonstrated, the question of its social validity from the student perspective has yet to be address. This study examines the social validity of SWPBS from the student perspective and assesses the usefulness of two instruments, the ABC Student Survey (ABC) and ABC-UBI Social Validity Interview (SVI), designed to addresses the social validity of SWPBS from the student perspective. The ABC was administered to 3835 students across eight Utah schools and the SVI was administered to 105 students across the same eight schools. The results of both measures were examined to determine the social validity of SWPBS and the acceptability of the psychometric properties of the two measures. The results indicate that in general, students strongly endorsed the social validity of SWPBS. Students tended to endorse the theoretical components of SWPBS more than the practical components. The results of the assessments of the ABC and SVI indicate that the ABC is an adequate measure of the general social validity of SWPBS while the SVI is at present an inadequate measure of the specific components of social validity and SWPBS.

TABLE OF CONTENTS

LIST OF TABLES

# ACKNOWLEDGMENTS

I would like to thank those people who made the completion of this project possible. I would like to extend special thanks to Dan Olympia for providing a way for me to move forward with my academic career when progress seemed impossible. Furthermore, I wish to thank Dan for his availability, patience, support, and encouragement that all combined to help restore my confidence in myself. I need to thank Kristin Swenson for liberally sharing her technical knowledge and for her patience with my lack thereof. Thank you to Lora Tuesday-Heithfield for helping me to clarify the concept of this project. I want to thank Heidi Mucha for suggesting a workable idea and for furnishing much of the data. Lastly, I need to thank my wife for her patience, love, and for living with me for the duration of this project.

# INTRODUCTION AND LITERATURE REVIEW

In 1997, the U. S. Department of Education amended and reauthorized the Individuals with Disabilities Education Act (IDEA). One significant amendment that was made was the prescription of the use of Positive Behavioral Supports (PBS). Since that time, PBS has gained significant attention throughout the nation and internationally. Most recently, PBS principles have been extended beyond individuals with disabilities and applied to entire schools in what is now called Schoolwide Positive Behavioral Interventions and Supports (SWPBS). The current estimates from the Office of Special Education Programs technical assistance center on Positive Behavioral Interventions and Supports suggest that over 10,000 schools worldwide are implementing SWPBS. The growing number of schools using SWPBS is not surprising in light of the growing body of evidence supporting its effectiveness (Horner & Sugai, 2007). Many of the schools in which SWPBS has been implemented have experienced a decrease in office discipline referrals (ODRs), a decrease in administrative time spent on discipline, and in some cases, improved academic outcomes (Bohanon et al., 2006; McIntosh, Horner, Chard, Boland, &Good Iii, 2006; Scott & Barrett, 2004). Notwithstanding all of these positive outcomes, very little is known about the social validity of SWPBS, particularly from the student perspective. This study examines the social validity of SWPBS in several Utah schools from the student perspective and the usefulness of two tools designed to assess social validity.

## History of SWPBS

SWPBS draws upon a long heritage of effective behavior management practices and is another link in the chain of the science of behaviorism dating back to the 1800s with Ivan Pavlov, Edward Thorndike, and John Watson (Miltenberger, 2004). In the 1930s, B.F. Skinner began conducting basic research on the principles of behavior. It was not long after this time that he developed and explored the concept of operant behavior (Skinner, 1963). Operant behavior is the process whereby an organism interacts with its environment in order to obtain a want or need. When the organism is successful, the behavior is reinforced; that is to say that the behavior is more likely to occur in the future. Recognizing the power of Skinner's work, other researchers began to explore operant procedures in the applied sciences, particularly as they relate to human behavior (Baer, Wolf, & Risley, 1968). Some researchers began to apply operant principles and procedures to problems in areas such as developmental disabilities, organizational behavior, and special education (Singer & Wang, 2009). Eventually, this body of research coalesced into a branch of behavior modification known as Applied Behavior Analysis (ABA), which was punctuated by the creation of the Journal of Applied Behavior Analysis in 1968. ABA provides a scientific basis for the use of both positive and aversive consequences in order to change human behavior. Consequently, techniques such as water misting, electric shock, and other aversive procedures are accepted practices in the ABA paradigm (Corte, Wolf, & Locke, 1971; Dorsey, Iwata, Ong, & McSween, 1980; William R. Jenson, 1985). Some researchers and practitioners found these practices to be immoral and reprehensible for two important reasons. First, they perceived that such practices compromise human dignity and demean individuals, most

often individuals with significant disabilities. Second, they maintained that behavior change can be achieved without the use of aversive procedures, thereby eliminating the need for such practices (Singer, Gert, & Koegel, 1999; Singer & Wang, 2009). This moral-based departure from traditional ABA facilitated the need for yet another branch of behavior modification, a branch devoted to human dignity, self-determination, and the normalization of individuals with disabilities (Singer & Wang, 2009). As early as 1993, researchers began to refer to this new approach to behavior modification in the literature as Positive Behavior Support or PBS (Dalrymple & Indiana Univ, 1993). By 1999, PBS was solidified as a distinct approach to behavior modification with the creation of the Journal of Positive Behavior Interventions (JPBI). This distinction was reaffirmed in 2003 with the foundation of the Association for Positive Behavior Support (www.apbs.org). As researchers and practitioners employed PBS principles to work with individuals with disabilities, it became clear that effective lasting behavior change occurs within the context of a system (i.e., a school or a community). So, one of the foci of the PBS movement became changing systems with the understanding that if individuals are going to experience behavioral success, it must happen within a system that promotes behavioral success (Sugai & Horner, 2009). In light of the 1997 IDEA legislation mandating the use of PBS principles in schools, the school system has became a natural focus of the PBS systems change effort. This focus on school systems coincided with an increased national concern about school violence and school safety (Sugai & Horner, 2002). The increased attention on and concern for schools resulted in the branch of PBS now known as Schoolwide Positive and Supports (SWPBS). This branch of PBS takes a

prevention-oriented, multitiered system level approach to improving behavior management in schools (Walker et al., 1996).

## History of SWPBS in Utah

The State of Utah has a long tradition of supporting positive and preventative efforts to manage behavior in schools. In the 1980s, Kenton Reavis and his colleagues created the BEST (Behavioral and Educational Strategies for Teachers) project, which culminated in the creation of a technical assistance manual designed to assist teachers with managing student behaviors in the classroom (Reavis et al., 1996). This manual was widely used throughout the state and continues to be used today by teachers and administrators. Utah schools also participated in a program intended to provide comprehensive wraparound services to students called FACT (Families and Agencies Coming Together). This program brought together all of the major stakeholders in student welfare issues to provide a wide range of services for students in need. This program eventually lost its funding and was discontinued. The next major advancement in behavior management came when the Utah State Office of Education (USOE), the Utah Personnel Development Center (UPDC), and the Utah State Personnel Development Improvement Grant (USPDIG) came together to create a training and technical assistance center for Utah schools to implement SWPBS. This effort is known as Utah's Behavior Initiative (UBI).

Most recently, the USOE, UPDC, and the USPDIG have modified their efforts to address both the academic and behavioral needs of schools using similar principles. This initiative has come to be known as ABC-UBI, which stands for Academics, Behavior,

and Coaching – Utah's Behavioral Initiative. The UBI side of the new ABC-UBI effort is described in detail below.

UBI has three levels of organization: state, district and school. The state level team consists of specialists in the areas of behavior management and special education. This team is responsible for providing personnel development activities for district coaches and building level UBI teams. The state UBI team controls funding to schools by requiring that schools submit a funding request and an action plan detailing how money will be spent. Those requests and plans are reviewed and modified or approved. Then schools receive funding to support their SWPBS efforts. These monies are used as seed funding because they are only available for the 3 years that a school is on the UBI training platform. Along with funding, state level personnel provide technical assistance through site visits and regular communication with district and school level personnel. The state UBI team is also responsible for providing two statewide training conferences per year. These conferences often include training from nationally recognized experts in the fields of special education, behavior management, and SWPBS. Finally, the state team provides a system of accountability. Schools are required to report on their bimonthly meetings and to submit a monthly summary of behavior data.

In order for districts to participate in UBI, they must first assemble a team comprised of a district coach, a representative from the superintendent's office, a representative from special education, a representative from regular education, and other district level staff as needed. The district coach is someone with expertise in behavior management, such as a school psychologist or behavior specialist. The position of district coach is not typically a full-time position and is filled by someone with other duties

within the district. Under the direction of the district coach, the district team agrees to meet quarterly and participate in UBI activities as prescribed by the state team. The district level team trains school UBI teams to implement SWPBS principles and practices in their respective buildings. This training takes place primarily during a multiday summer training retreat. The district coach provides technical assistance, consultation, and support to school level teams. The district coach also regularly evaluates the fidelity of implementation of SWPBS in schools.

Individual schools begin by applying to participate in UBI through the district level UBI coach. Part of the application process consists of demonstrating that a school has at least 80% staff support for the UBI effort. The coach then takes the application to the state level team and they together decide if the school is ready to participate. Schools that are admitted agree to participate in a 3-year training platform. Participation in the UBI program requires the following: (a) assembling a building level UBI team consisting of the building administrator, a building coordinator, a representative sample of teacher, and other support staff; (b) meeting twice a month to plan and implement SWPBS activities; (c) reporting behavior data to the state team monthly and; (d) participating in three training conferences per year. Schools receive training, funding, support, and technical assistance from the state level team for 3 years during which time districts and schools are to work together to build the capacity to sustain SWPBS after the 3-year training platform ends, though no specific model or plan for sustaining SWPBS is currently in use.

## Social Validity

Social validity is an important concept within the practice of SWPBS. The concept first appeared in the ABA literature and was articulated in 1977 by Alan Kazdin, who referred to it as *social validation* (Kazdin, 1977). The following year, Montrose Wolf, in a seminal article on the subject, coined the expression *social validity* (Wolf, 1978). However, a decade earlier, Baer, Wolf, and Risley were already considering the importance of society's acceptance of behavior modification technologies when they wrote, "A society willing to consider a technology of its own behavior apparently is likely to support that application when it deals with socially important behaviors…" (Baer et al., 1968, p. 91). This attention paid to the societal import of behavior modification was passed down, at least in theory, from ABA to PBS and now to SWPBS.

Broadly defined, social validity is the extent to which an intervention is acceptable and meaningful to those involved (Carr, Austin, Britton, Kellum, & Bailey, 1999; Wolf, 1978). This concept has received significant attention in the applied behavior analysis literature because it is one of the defining characteristics of applied science. Historically, social validity has been broken down into three important components: *goals*, *procedures*, and *effects* (Wolf, 1978). The component of social validity concerned with *goals* seeks to determine if the aim of a particular behavior modification project is important to those sections of society that might be influenced by its success. The component of social validity concerned with *procedures* seeks to determine the acceptability of the proposed techniques in behavior modification to relevant members of society. Finally, the component of social validity concerned with *effects* seeks to determine if the outcomes of a behavior modification project are

perceivable and meaningful to those elements of society that might be affected by the change in behavior. Assessment of the *goals* and *procedures* aspects of social validity can be conducted and often are conducted before, during, and after the completion of a behavior modification project. Typically, assessment of the *effects* aspect of social validity is conducted after a behavior modification intervention has been implemented (Kennedy, 1992).

In 1977, Kazdin identified the two primary methods for assessing social validity (Kazdin, 1977). The first method is called *social comparison*. This method requires the researchers to identify a normative group with which to compare the intervention group. The normative group needs to be as much like the intervention group as possible on as many variables as possible, other than the behavior that the intervention is intended to change. Using this process, researchers can establish a benchmark for what is a "normal" amount, intensity, duration, or latency for the behavior of interest. This method functions under the assumption that if an individual's behavior is similar to that of demographically identical peers, then it is acceptable to society.

The second method for assessing social validity is *subjective evaluation* (Kazdin, 1977). This method is subjective because it relies on what B. F. Skinner called, "verbal behaviors," which are internal and therefore cannot be directly observed (Skinner, 1957). Most often, this method entails asking people what they think, what they perceive, or how they feel about a participant's behavior. These data are typically collected using questionnaires, interviews, focus groups, or some combination of these methods.

Establishing that a behavior modification project is socially valid is more than just an interesting side note to the actual behavior change; it is essential to the survival of

such a project. Schwartz and Baer discuss what can happen when a behavior change technology is socially rejected or socially invalid (Schwartz & Baer, 1991). The first potential negative consequence of social invalidity is indifference toward a behavior modification technology irrespective of its effectiveness. It matters very little whether or not researchers achieve the behavior change that they are looking for if those members of society who will maintain the behavior change do not value the change or the way that the change was achieved. The second and potentially more serious negative consequence of social invalidity is the active rejection of a behavior modification effort. In some cases, members of society may find a behavior change effort so disagreeable that they actively try to stop the effort. Here again, the effectiveness of an intervention is irrelevant when society actively rejects the intervention. So, changing peoples' behavior can be irrelevant or counterproductive, depending on how society views both the change and the method of effecting that change (Schwartz & Baer, 1991).

While social validity is an integral part of the roots of SWPBS, some researchers indicate that it has not yet reached the SWPBS "branch" of the behavior modification "tree." In 1999, leading researchers in the field published a synthesis of the PBS research conducted with individuals with disabilities (E. G. Carr, et al., 1999). The synthesis concluded that out of 230 participants, only 14 were asked about the social validity of the project in which they participated. Of those 14 cases in which social validity data were provided, in only six cases was something more than anecdotal evidence provided. The assessment of social validity is clearly lacking in the greater PBS literature. In the SWPBS literature, it is all but nonexistent. A search of academic psychology and education journals using the terms "Schoolwide Positive Behavior Support" and "Social

Validity" produces one non-research-based article on the subject (Scott, 2007). There is currently no substantive research literature that addresses the issue of the social validity of SWPBS.

It is worth noting that some controls for social validity are built into the implementation of SWPBS. For example, schools are encouraged to have at least 80% staff "buy in" before they adopt a SWPBS framework. This practice could be loosely equated with having school staff endorse the *goals* aspect of social validity. It is also worth noting that nowhere in the SWPBS principles and practices is there an explicit effort to assess social validity from the student perspective. Moreover, E. G. Carr et al. (1999), indicated in their review of the PBS literature that there were no studies that reported how the recipient of the intervention perceived the social validity of the intervention. The question of how individuals that are the recipients of the behavior change efforts perceive those efforts seems to be almost totally absent in the SWPBS literature and in the greater PBS literature.

## Statement of the Problem

While SWPBS has been in use in many Utah schools for nearly 10 years, very little is known about how the students perceive their school experience when SWPBS principles and practices are implemented. According to the UPDC, many schools that have implemented SWPBS report a decrease in the overall number of office discipline referrals per year, an increase in scores on the Schoolwide Evaluation Tool, and a decrease in administrative time spent on discipline. However, almost no effort has been made to determine the social validity of SWPBS from the student perspective. Given that students are the primary recipients of SWPBS interventions, their perspective needs to be

a priority when assessing the success of SWPBS efforts. This study examined how students in schools that are implementing SWPBS perceive their schools and their school experience and thus provide a basis for understanding the social validity of SWPBS in Utah schools. It also examined the usefulness of two tools that were designed to measure social validity. Specifically, this study examined the following questions:

1. Do students endorse the social validity of the four components of Tier 1 SWPBS as measured by the Social Validity Interview and ABC Student Survey?
2. Does the ABC Student Survey have satisfactory psychometric properties?
    a. Sensitivity
    b. Variability
    c. Internal consistency
3. Does the PBS Social Validity Interview have satisfactory psychometric properties?
    a. Sensitivity
    b. Variability
    c. Internal consistency
4. How satisfied are students in UBI Schools with their school experience, as measured by the ABC Student Survey?
    a. By school
    b. By grade
    c. By gender

# METHODS

## Participants and Setting

The Utah Personnel Development Center (UPDC), as part of its accountability for a State Improvement Grant, collected the data that were used in this study. Only schools that were currently participating in the 3-year UBI training platform were invited to participate.

The participants in this study included the students from eight Utah schools in eight different school districts. These schools included one junior high charter school, one 8th and 9th grade school, and six elementary schools. These schools represent a wide spectrum of demographic areas in Utah, including rural, suburban, and urban. The schools that participated in this study voluntarily provide annual data to the UPDC. The combined student body of these eight schools equaled 5,058 students. Each school is described in greater detail below.

*School A* – This elementary is located in a rural part of Utah and serves 505 students. Of these students, 1.2% identify themselves as African American, 1.8% as American Indian, 0.8% as Asian, 13.1% as Hispanic, and 83.2% as White. English Language Learners (ELL) make up 2% of the population and 10.9% of the students are served in Special Education. The percentage of students receiving free or reduced lunch is 44.3 and the mobility rate is 16.6% with an average attendance of 95%. The student to adult ratio is 14.27 with 24 teachers.

*School B* – This elementary is located in a suburban part of Utah and serves 843 students. Of these students, 1.4% identify themselves as African American, 0.1% as American Indian, 1.4% as Asian, 9.6% as Hispanic, 0.6% as Pacific Islander, 86.4% as White, and 0.5% are unidentified. English Language Learners (ELL) make up 2.4% of the population and 9.1% of the students are served in Special Education. The percentage of students receiving free or reduced lunch is 32 and the mobility rate is 10.2% with an average attendance of 96%. The student to adult ratio is 21.46 with 41 teachers.

*School C* - This elementary is located in a rural part of Utah and serves 339 students. Of these students, 0.6% identify themselves as African American, 7.1% as American Indian, 0.3% as Asian, 7.7% as Hispanic, 0.6% as Pacific Islander, and 83.8% as White. English Language Learners (ELL) make up 6.5% of the population and 9.7% of the students are served in Special Education. The percentage of students receiving free or reduced lunch is 41.8 and the mobility rate is 15% with an average attendance of 95%. The student to adult ratio is 12.91 with 19 teachers.

*School D* - This elementary is located in an urban part of Utah and serves 557 students. Of these students, 5.2% identify themselves as African American, 0.9% as American Indian, 3.2% as Asian, 65.9% as Hispanic, 14.5% as Pacific Islander, 10.1% as White, and 0.2% are unidentified. English Language Learners (ELL) make up 69.8% of the population and 9.9% of the students are served in Special Education. The percentage of students receiving free or reduced lunch is 91 and the mobility rate is 26.3% with an average attendance of 96%. The student to adult ratio is 12.58 with 31 teachers.

*School E* - This $8^{th}$-$9^{th}$ grade center is located in a rural part of Utah and serves 1046 students. Of these students, 0.7% identify themselves as African American, 0.4%

as American Indian, 0.7% as Asian, 6.1% as Hispanic, 0.4% as Pacific Islander, and 91.8% as White. English Language Learners (ELL) make up 4.5% of the population and 9.9% of the students are served in Special Education. The percentage of students receiving free or reduced lunch is 28.4 and the mobility rate is 7.9% with an average attendance of 96%. The student to adult ratio is 21.82 to with 49 teachers.

*School F* - This elementary is located in a suburban part of Utah and serves 755 students. Of these students, 3.7% identify themselves as African American, 1.9% as American Indian, 0.8% as Asian, 31.4% as Hispanic, 4.2% as Pacific Islander, 57.9% as White, and 0.1% are unidentified. English Language Learners (ELL) make up 26.4% of the population and 13.8% of the students are served in Special Education. The percentage of students receiving free or reduced lunch is 51.1 and the mobility rate is 27.4% with an average attendance of 95%. The student to adult ratio is 21.21 to with 33 teachers.

*School G* - This elementary is located in a suburban part of Utah and serves 630 students. Of these students, 0.8% identify themselves as African American, 0.2% as American Indian, 1.6% as Asian, 0.8% as Hispanic, 0.8% as Pacific Islander, 93.5% as White, and 2.4% are unidentified. English Language Learners (ELL) make up 2.9% of the population and 11.6% of the students are served in Special Education. The percentage of students receiving free or reduced lunch is 16.6 and the mobility rate is 8.7% with an average attendance of 97%. The student to adult ratio is 22 to with 29 teachers.

*School H* – This $6^{th} – 9^{th}$ grade charter school is located in a suburban part of Utah and serves 393 students. Due to that fact that *School H* is a charter school, the

demographic information for this school is not available on the Utah State Office of Education Website.

## Intervention

As mentioned previously, schools that wish to participate in the ABC-UBI initiative agreed to participate in a 3-year training and technical support platform. During those 3 years, schools are expected to accomplish certain things. The following is a general description of what is expected of schools as they progress from year one to year three.

*Year one* – During the first year of participation in ABC-UBI, schools typically complete the tasks described below. The staff in a school initially completes the Effective Behavior Support Self Assessment Survey, which is a needs assessment. The information from this survey provides a profile of the school's strengths and weaknesses, which is then used to guide intervention efforts. Then the school assembles an ABC-UBI team that is representative of the staff. This team selects a data collection system and determines what behavioral data will be collected, how often they will be collected, and how they will be reviewed to inform decision-making.

*Year two* - Sometime between the end of the first year and the beginning of the second year, the ABC-UBI team develops 3 to 5 schoolwide behavioral expectations as recommended by SWPBS practices. These expectations describe how all staff and all students should act in all common settings (i.e., hallways, cafeteria, bathrooms, front office, playground, etc.). These expectations are presented to the staff for approval and then adopted as the norm for appropriate behavior throughout the school.

With the expectations in place, the next task for the ABC-UBI team is to

determine how, where, and when the expectations will be explicitly taught to the student body. The expectations are often taught by way of a schoolwide assembly or a tour of the school so that the expectations can be taught in the respective locations where they will be required.

Once students know the expectations, the team develops a systematic continuum for reinforcing students who meet the behavioral expectations. A common intervention used to reinforce behavioral expectations is the Principal's 200 club (W. R. Jenson, Rode, Evans, & Morgan, 2006). This intervention encourages teachers to identify and acknowledge students who are demonstrating the behavioral expectations. Those students are then eligible to access a desired reinforcer.

Even though students have been taught the behavioral expectations, there will still be occasions when students commit errors. So, the ABC-UBI team develops a continuum of strategies for correcting behavioral errors. This continuum differentiates between what behaviors should be handled in the classroom and what behaviors should be sent to the office. The team is responsible to ensure that behavior correction procedures are based on effective research-validated practices. Some of the practices that are commonly used are Think Time, Precision Requests, and The One Minute Skill Builder (Fister-Mulkey & Kemp, 1995; Nelson & Carr, 1999; Rode, Jenson, & Reavis, 1993).

*Year three* – During the third year of the ABC-UBI training platform, teams begin to focus on those students that are not responding to the schoolwide behavior management efforts. These students fall along a continuum from mildly nonresponsive to extremely nonresponsive and require different interventions depending upon where they fall. These are the students that are identified for access to Tier 2 and Tier 3 services as

indicated by a tiered approach to behavior management. Some of the interventions that are commonly used with students that do not respond to the schoolwide behavior management efforts are: the Behavior Education Program, social skills training groups, structured recess, and behavior contracts (Crone, Hoerner, & Hawken, 2004). For the most severe students, teams work to provide wraparound services, which includes developing relationships with local mental health agencies and family support groups in order to provide individualized and intensive supports.

## Measures

To conceptually match each component of social validity with the components of SWPBS, the following matrix (Figure 1) was developed by the researcher. Each item was selected to represent the integration of the three components of social validity with the four components of Tier 1 SWPBS. Each question was specifically designed to assess how students perceive some aspect of the social validity of a specific component of SWPBS. The matrix was designed to be theoretically comprehensive and consistent with the work of Sugai and Horner (2009) on SWPBS and the work of Wolf (1978) on social validity. Each measure used in this study is intended to address the components represented in the matrix or to validate other measures used in this study.

*ABC Student Survey (ABC)* - The ABC was developed in 2010 by Dr. Heidi Mathie-Mucha of the UPDC and Dr. Leanne Hawken of the University of Utah (see Appendix). This survey was based on The Oregon Safe School Survey with significant adaptations to make it appropriate for and accessible to students in grades kindergarten through ninth grade (Sprague, Colvin, & Irvin, 1995). This survey was designed to assess how satisfied students are with the social/behavioral components of their

Figure 1

Social Validity by SWPBS Matrix

| | | Components of Tier 1 SWPBS | | | |
|---|---|---|---|---|---|
| | | Establish Expectations | Teach Expectations | Reinforce Expectations | Correct Errors |
| Components of Social Validity | Goals | Is it important to have rules at school? | Should you and your friends know the school rules? | Should you and your friends be rewarded for following the rules? | Should kids get in trouble when they break the rules? |
| | Procedures | Are your school rules fair? | Do you like the way that the rules are taught? | Do you like the reinforcement program? | When kids get in trouble, is the teacher fair? |
| | Effects | (Students are not involved in establishing expectations) | Do you know the school rules? | Are you and your friends excited to participate in the reinforcement program? | After kids get in trouble do they follow the rules? |

respective schools. This measure is significant to the current study because customer satisfaction is often equated with general social validity. Drs. Mathie-Mucha and Hawken decided to develop this measure in light of the absence of accepted measures for assessing student satisfaction across a wide range of age groups in schools that are implementing SWPBS. The ABC was not designed to examine any specific component of social validity; rather, it was designed to look at social validity as a construct of general satisfaction. Consequently, many of the questions from the ABC do not address specific components of the matrix. There are, however, two questions from the ABC that do fit into the matrix; these questions address the Effects of Teaching Expectations (*Do you know the school rules?*) and the Procedure of Correcting Errors (*If you get in trouble, is your teacher fair?*). Consequently, the ABC was used to supplement the SVI.

*ABC-UBI Social Validity Interview (SVI)* – As the researcher looked for instruments for assessing the social validity of SWPBS, it became clear that no such instruments were in use in the SWPBS literature. The SVI (see Appendix) was developed by looking at where the ABC did not address all of the components of the matrix and then creating the needed questions. The SVI was designed to maximize construct validity in that it comprehensively addresses the intersection of Social Validity and Tier 1 SWPBS and is firmly grounded in social validity theory and SWPBS theory and practice (Sugai & Horner 2009; Wolf, 1978).

## Procedures

The data that were analyzed in this study came from archival sources and are all part of an ongoing effort by the UPDC to help schools with progress monitoring and

data-based decision-making. The data collection procedures used by the UPDC are described in detail below.

*ABC-UBI Social Validity Interview* (SVI) – As part of a yearly program evaluation, the UPDC solicited the participation of schools that were participating in the 3-year ABC-UBI training platform to participate in the SVI. Out of 13 schools, nine schools agreed to participate. After agreeing to participate, one school did not complete the SVI so ultimately, eight schools participated in this study. The building coordinator from each participating school was emailed an electronic copy of the SVI and instructed to interview 15 students and record their answers. The building coordinators were instructed to select students that were willing participants so that no student felt unduly pressured to participate. No personally identifiable information was collected during the administration of the SVI. Once the SVI interviews were completed by the building coordinator, they were faxed to the researcher who compiled the data on behalf of the UPDC. The researcher then shared the results with the UPDC.

*ABC Student Survey* (ABC) – As another segment of a yearly program evaluation, the UPDC solicited the participation of schools that were participating in the 3-year ABC-UBI training platform to participate in the ABC Student Survey. Nine schools agreed to participate. However, because one school did not complete the SVI, that school was excluded from this study. The UPDC mailed out a packet containing paper and pencil surveys to the ABC-UBI building coordinator of each school. The packet contained enough surveys for each student in the school and instructions explaining how to complete the surveys. The building coordinator then gave each teacher enough surveys for their respective classes. Each teacher administered the survey to the whole

class simultaneously. Students were instructed to complete the survey on their own without conferring with other students. Teachers were instructed to help students to understand any questions that they struggled with but not to provide or even suggest an answer. When the surveys were completed, they were returned to the building coordinator who placed them in a packet and mailed them back to the UPDC.

At no time did the UPDC staff or the researcher conducting this study have any contact with any student or teacher other than the building coordinator regarding the survey. To ensure that teachers and students were not unduly influenced to participate in the survey, any student could decline to complete a survey and any teacher could decline to administer the survey. In order to ensure anonymity, no individually identifiable information was requested on the surveys. However, the surveys were color coded so that the UPDC could provide school-specific feedback to those that participated. No specific permission was required from students to participate in this survey. The students provided no individually identifying information. When schools initially begin participating in ABC-UBI, they agree to participate in program evaluation and they receive district approval to this effect. Parents are notified that the school will be participating in ABC-UBI, which may include participating in program evaluation. Parents are provided opportunities to decline to have their students participate in any program evaluation.

The UPDC provided the building coordinator of each school that completed the survey with five gift certificates in the amount of 10 dollars each to be handed out to teachers. The recipients of the certificates were chosen via a random drawing. The UPDC also sent the building coordinator 10 gift certificates for a local restaurant in the

amount of 5 dollars each. These certificates were given to students that were chosen via a random drawing.

When the surveys arrived at the UPDC, they were given directly to data entry specialists who entered the data into an Excel spread sheet for later analysis. The surveys were disposed of. The researcher was provided with the data from the Excel spreadsheet to answer the research questions.

## Design

The ABC was administered to as many willing students that attended school on the day it was administered for a total of 3,835 student responses (School A – 469, School B – 557, School C – 269, School D – 514, School E – 728, School F – 501, School G – 433, School H – 366). ABC average scores were calculated for each school and means and standard deviations were reported. The ABC average scores were used as a dependant variable in assessing students overall satisfaction with their school experience and in addressing two specific components of the social validity of SWPBS. Demographic information was reported for each school, including number of students enrolled, racial make up of student body, percentage of students receiving free or reduced lunch, percentage of students receiving special education services, percentage of students classified as English Language Learners, and student to adult ratio.

The first research question was addressed by reporting percentages of *yes* responses to each of the questions included in the matrix. Due to the varying number of participants in the ABC and the SVI, confidence intervals are reported for each question and the broader confidence intervals denote the smaller sample sizes. The distributions of these scores were tested for normality. A post-hoc repeated measures ANOVA was

conducted using a within-subjects factor that was based on the theoretical components of SWPBS. This analysis was conducted to identify a main effect of responses grouped according to each question's more practical or more theoretical nature.

Question number two was answered using descriptive statistics, including means and standard deviations from the ABC measure. These descriptive statistics are reported overall and for each school, each grade, and each gender. Furthermore, one-way ANOVAs using the satisfaction score from the ABC Student Survey as the dependent variable were used to identify any significant relationships between satisfaction and school, grade, gender, or specific demographic characteristics.

The third question was addressed using one-way ANOVAs with independent variables of school, grade, and gender and the ABC Student Survey as the dependant variable to determine sensitivity. Cronbach's Alpha was used to determine internal consistency and kurtosis and skewness statistics to evaluate the distribution of scores.

Question number four is answered by conducting one-way ANOVAs with school grade and gender as independent variables and the ABC-UBI Social Validity Interview as the dependant variable to determine sensitivity, Cronbach's Alpha to determine internal consistency, and factor analysis to determine if the results are consistent with the theory.

# RESULTS

Table 1 provides a summary of the demographic characteristics of each of the schools that participated in this study. This information is intended to provide a fuller picture of each school and aid in the interpretation of the results of the ABC.

The participating schools consisted of six elementary schools and two secondary schools. The secondary schools both serve Junior High School age students. No high schools participated in the study. Suburban, urban, and rural schools were all represented in the sample of participants. These schools represent a wide variety of demographic

Table 1

Summary of School Demographic Characteristics

| | | | | | Percentages | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| School | *N* | *n* | Level | Demo | Min | ELL | SPED | SES | Mob | S/A |
| A | 505 | 467 | E | R | 16.9 | 2 | 10.9 | 44.3 | 16.6 | 14.27 |
| B | 843 | 557 | E | S | 13.1 | 2.4 | 9.1 | 32 | 10.2 | 21.26 |
| C | 339 | 269 | E | R | 16.3 | 6.5 | 9.7 | 41.8 | 15 | 12.91 |
| D | 557 | 514 | E | U | 89.7 | 69.8 | 9.9 | 91 | 26.3 | 12.58 |
| E | 1046 | 728 | S | R | 8.3 | 4.5 | 9.9 | 28.4 | 7.9 | 21.82 |
| F | 755 | 501 | E | U | 42 | 26.4 | 13.8 | 51.1 | 27.4 | 21.21 |
| G | 630 | 433 | E | S | 5 | 2.9 | 11.6 | 16.6 | 8.7 | 22 |
| H | 1001 | 366 | S/C | S | N/A | N/A | N/A | N/A | N/A | N/A |

*Note.* *N* = total school enrollment, *n* = participants, E = elementary school, S = secondary school, C = charter school, R = rural, S = suburban, U = urban, Min = minority population, ELL = English language learner, SPED = students served in special education, SES = socio-economic status determined by the number of students receiving free or reduced lunch, Mob = mobility, S/A = student to adult ratio, N/A = not available.

characteristics. For example, the percentage of students receiving free or reduced lunch ranges from 16.6% in one suburban school to 91% in one of the urban schools for a difference of 74.4%.

## Research Question 1

1.) *Do students endorse the social validity of the four components of Tier 1 SWPBS as measured by the Social Validity Interview and ABC Student Survey?*

Table 2 presents percentages of *yes* responses for those items from the ABC that are included in the matrix. Table 3 presents percentages of *yes* responses for those questions from the SVI that are included in the matrix mentioned previously. These tables present the results in relation to each individual question. Confidence intervals were calculated for each question because of the varying number of respondents between the two measures and the wider confidence intervals reflect the smaller sample size.

Responses indicate that with very few exceptions, students endorsed the importance of having rules (*Is it important to have school rules?*), the fairness of the rules (*Are you school rules fair?*), and of knowing the rules (*Do you know the school rules?*). Fewer students endorsed the importance of being rewarded for following the rules (*Should you and your friends be rewarded for following the school rules?*) and the fairness of teachers when students get in trouble (*If you get in trouble, is your teacher fair?*). The least number of students endorsed the effectiveness of correcting behavior (*After kids get in trouble, do they follow the rules?*). Percentages of *yes* responses across all questions ranged from 65.7 to 99 for a 33.3% difference between the highest and lowest results. The difference between the lowest result and the second lowest result is 18.1%. This accounts for more than half of the difference in the range of results.

Table 2

Student Endorsement of Social Validity of SWPBS by ABC Question

| Survey Questions | *n* | % of "yes" | Confidence Interval (95%) |
|---|---|---|---|
| Do you know the rules? | 3835 | 95.6 | 94.9 to 96.3 |
| If you get in trouble, is the teacher fair? | 3835 | 83.8 | 82.5 to 84.9 |

Table 3

Student Endorsement of Social Validity of SWPBS by SVI Question

| Survey Questions | *n* | % of "yes" | Confidence Interval (95%) |
|---|---|---|---|
| Are your school rules fair? | 105 | 96.2 | 90.5 to 98.9 |
| Should you and your friends know the rules? | 105 | 98.1 | 93.3 to 99.8 |
| Did you like the way the rules were taught? | 105 | 91.4 | 84.3 to 96 |
| Is it important to have school rules? | 105 | 99 | 94.8 to 99.9 |
| Should you and your friends be rewarded for following the rules? | 105 | 84.8 | 74.6 to 91 |
| Do you like the reward system? | 105 | 91.4 | 84.3 to 96 |
| Are you and your friends excited to participate in the reward program? | 105 | 88.6 | 80.9 to 93.9 |
| Should kids get in trouble when they break the rules? | 105 | 93.3 | 86.7 to 97.3 |
| After kids get in trouble, do they follow the rules? | 105 | 65.7 | 55.8 to 74.7 |

Table 4 presents the same data contained in Table 1, but it reorganizes items conceptually to conform to the matrix of social validity and SWPBS. Table 4 shows the relationship between the components of Social Validity and the components of SWPBS by including mean percentages calculated for each item/component. Table 4 also highlights a trend in how students responded to the questions indicated on the matrix. The top-left section of this matrix represents the more theoretical components of social validity and SWPBS. Moving down the Y-axis and from right to left along the X-axis, the components of both social validity and SWPBS become progressively more practical.

Table 4 indicates that Correct Errors is the least endorsed component of Tier 1 SWPBS (81%) while Establish Expectations is the most endorsed component (99%). The difference between the most endorsed and least endorsed component is 16.6 percentage points. These data also show that Goals is the most endorsed component of social validity (93.8%) by students, while Effects is the least endorsed component (83.3%). Overall, students endorsed the combined components of SWPBS and social validity at 89.8%.

Table 4

Student Endorsement of Social Validity of SWPBS by Component

| | | Theory → Practice | | | | |
|---|---|---|---|---|---|---|
| Theory ↓ Practice | | Establish Expectations | Teach Expectations | Reinforce Expectations | Correct Errors | Mean |
| | Goals | 99% | 98.1% | 84.8% | 93.3% | 93.8% |
| | Procedures | 96.2% | 91.4% | 91.4% | 83.8% | 90.7% |
| | Effects | N/A | 95.6% | 88.6% | 65.7% | 83.3% |
| | Mean | 97.6% | 95% | 88.3% | 81% | 89.8% |

As the components of social validity and SWPBS move from theoretical to practical, students endorse them less often. This trend is clearly demonstrated by the convergence of the most theoretical elements of social validity and SWPBS being most highly endorsed (high value of 99%) while the most practical elements of social validity and SWPBS are endorsed (low value of 65.7%) less frequently by students. Moreover, each component (with one exception) in Table 4 is endorsed progressively less in the matrix beginning in the top left corner and moving to the bottom right corner. A repeated measures ANOVA indicated a statistically significant downward trend, $F(3, 312)=19.387$, $p<.001$, as components of SWPBS move from theoretical to practical.

## Research Question 2

2.) *How satisfied are students in UBI Schools with their school experience, as measured by the ABC Student Survey?*

Table 5 displays the actual number of respondents from each school and provides the means and standard deviations of overall ABC results per school and total mean scores at the bottom.

The means range from 7.00 to 9.12 resulting in a difference of 2.12-points on a 10-point scale. The standard deviations range from 1.126 to 2.544 for a difference of 1.148. School B, a large suburban elementary school, reported the highest school satisfaction ($M = 9.12$) and the least variation in responses ($SD = 1.126$). School E, a rural 8th and 9th grade school, reported the lowest school satisfaction ($M = 7.00$) and the most variation in responses ($SD = 2.544$). Table 6 displays the number of respondents per grade and the means and standard deviations of their responses. Seventh grade had the fewest respondents ($n = 93$) while 8th grade had the most respondents ($n = 476$). With the

Table 5

Student Satisfaction by School

| School | *n* | Mean | Standard Deviation |
|---|---|---|---|
| A | 467 | 8.73 | 1.584 |
| B | 557 | 9.12 | 1.126 |
| C | 269 | 8.94 | 1.278 |
| D | 514 | 8.60 | 1.505 |
| E | 728 | 7.00 | 2.544 |
| F | 501 | 8.43 | 1.629 |
| G | 433 | 8.90 | 1.428 |
| H | 366 | 7.89 | 2.016 |
| Total | 3835 | 8.45 | 1.639 |

Table 6

Student Satisfaction by Grade

| Grade | *N* | Mean | Standard Deviation |
|---|---|---|---|
| K | 203 | 8.69 | 1.717 |
| 1 | 453 | 8.88 | 1.359 |
| 2 | 475 | 8.85 | 1.359 |
| 3 | 408 | 8.92 | 1.310 |
| 4 | 430 | 8.54 | 1.518 |
| 5 | 437 | 8.68 | 1.559 |
| 6 | 435 | 7.27 | 2.168 |
| 7 | 93 | 7.37 | 2.302 |
| 8 | 476 | 7.37 | 2.302 |
| 9 | 425 | 7.01 | 2.613 |

exception of kindergarten and seventh grade, all grades had a high number of respondents. Mean satisfaction scores range from 7.01 to 8.92 for a difference of 1.96 on a 10-point scale. The standard deviations range from 1.310 to 2.613 for a difference of 1.303. The 3rd grade students reported the greatest satisfaction ($M = 8.92$) and the least variation in responses ($SD = 1.310$). The 9th grade students reported the least satisfaction ($M = 7.01$) and the greatest variation in responses ($SD = 2.613$). There is a significant negative correlation ($r = -.326$, $p<.001$) between grade and school satisfaction. That is to say, as students get older, they report less satisfaction with their school experience as measured by the ABC.

Table 7 shows the number of respondents by gender and the corresponding means and standard deviations. Females demonstrated greater satisfaction with their school experience and less variability in their responses while males demonstrated less satisfaction with their school experience, $t\ (3703) = 4.815$, $p<.001$ and greater variability overall, $F(3, 3831) = 30.407$, $p<.001$ when considering all schools and grades together. There was a 0.36 difference in mean responses on a 10-point scale.

Table 8 provides differences between responses by demographic location; rural, suburban, and urban. There is a significant difference in how students in rural areas rate their school experience compared to how suburban and urban students rate their school experience, $F(1, 3832)=70.627$, $p<.001$.

## Research Question 3

*3.) Does the ABC Student Survey have satisfactory psychometric properties?*

The ABC is a sensitive measure as demonstrated by significantly different responses between schools, $F(7, 3827) = 95.368$, $p<.001$; partial eta squared = .149, and

Table 7

School Satisfaction by Gender

| Gender | *n* | Mean | Standard Deviation |
|---|---|---|---|
| Male | 1896 | 8.21 | 2.048 |
| Female | 1809 | 8.57 | 1.646 |

Table 8

Satisfaction by Location

| Location | Mean | Standard Error | Confidence Interval |
|---|---|---|---|
| Rural | 7.907 | .049 | 7.811 to 8.003 |
| Suburban | 8.716 | .051 | 8.616 to 8.816 |
| Urban | 8.512 | .059 | 8.397 to 8.628 |

significantly different responses between grades, $F(8, 3623) = 71.49$, $p<.001$; partial eta squared = .136. The ABC has adequate internal consistency as indicated by a Cronbach's Alpha of .70, which is low but meaningful in light of the fact that the ABC is not divided into subscales.

The distribution of scores is provided in Table 9. The skewness and kurtosis statistics were calculated to determine whether the measure met the assumption of normality necessary to be used as a dependent variable in a parametric analysis. The analysis produced values within the normal range.

## Research Question 4

4.) *Does the PBS Social Validity Interview have satisfactory psychometric properties?*

The fourth research question examined the psychometric properties of the SVI. This was accomplished by assessing the sensitivity and internal consistency of the measure. A factor analysis was also conducted to determine if responses fell into categories consistent with those represented by the matrix.

A series of ANOVAs using SVI scores as the dependent variable were conducted to assess the sensitivity of the SVI. The SVI was able to detect differences between schools, $F(6, 98) = 3{,}296$, $p<.001$: partial eta squared = .168, between grades, $F(9, 95) = 2{,}498$, $p<.001$: partial eta squared = .191, but not between secondary and elementary schools, $F(1, 103) = .888$, $p= .348$; and not between rural and suburban/urban schools $F(1, 103) = 2.535$, $p=.084$. The internal consistency was calculated using Cronbach's alpha and produced a nonsignificant value of .236. There is little evidence to indicate that the nine items included in the SVI measure a unified concept, in this case, social

validity. Even when the Cronbach's alpha was calculated using the factors that follow as subscales, neither the highest score (.564) nor the lowest (.123) was an acceptable score to establish internal consistency.

A factor analysis was conducted using principal component analysis and resulted in four different factors with eigenvaluse greater than 1. These factors combined to account for 54.5% of the total variance among items and are summarized in Table 10.

Factor 1, accounting for 20.58% of the variance, was comprised of three questions intended to measure the social validity of the procedures used to teach the expectations (*Did you like the way the rules were taught?*), the goal of reinforcing the expectations (*Should you and your friends be rewarded for following the rules?*), and the procedure of reinforcing the expectations (*Do you like the reward system?*). Factor 2, accounting for 14.24% of the variance, was comprised of two questions intended to assess the social validity of the goal of establishing expectations (*Is it important to have school rules?)* and the effect goal of reinforcing expectations (*Should you and your friends be rewarded for following the rules?*). Factor 3, accounting for 13.25% of the variance, consisted of three questions intended to measure the social validity of the goal of teaching expectations (*Should you and your friends know the rules?),* the goal of correcting errors (*Should kids get in trouble when they break the rules?*), and the effect of correcting errors (*After kids get in trouble, do they follow the rules?*). Factor 4, accounting for 11.35% of the variance, was comprised of a single question addressing the social validity of the procedure of establishing expectations (*Are your school rules fair?*). Together, all four factors combined to account for 54.4% of the variance in scores. These factors do not

Table 9

Distribution of Scores for ABC

| | |
|---|---|
| *N* | 3835 |
| Mean | 8.35 |
| Standard Deviation | 1.907 |
| Skewness | -1.553 |
| Standard Error of Skewness | .040 |
| Kurtosis | 2.678 |
| Standard Error of Kurtosis | .079 |

Table 10

Factor Analysis Component Matrix of Social Validity Interview

| Questions | Social Validity Component | SWPBS Component | Factor | | | |
|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 |
| Is it important to have school rules? | Goals | Establish Expectations | | x | | |
| Are your school rules fair? | Procedures | Establish Expectations | | | | x |
| Should you and your friends know the rules? | Goals | Teach Expectations | | | x | |
| Did you like the way the rules were taught? | Procedures | Teach Expectations | x | | | |
| Should you and your friends be rewarded for following the rules? | Goals | Reinforce Expectations | | x | | |
| Do you like the reward system? | Procedures | Reinforce Expectations | x | | | |
| Are you and your friends excited to participate in the reward program? | Effects | Reinforce Expectations | x | | | |
| Should kids get in trouble when they break the rules? | Goals | Correct Errors | | | x | |
| After kids get in trouble, do they follow the rules? | Effects | Correct Errors | | | x | |

appear to be consistent with the hypothesized components of social validity or the components of Tier 1 SWPBS.

In summary, eight Utah schools that were implementing SWPBS participated in this study. Students from each school completed the ABC ($n$ = 3835) and the SVI ($n$ = 105). The results of the two surveys indicated that, almost without exception, students endorse the social validity of the goal of having rules. These students endorse the social validity of procedures associated with correcting behavior much less. The survey results also indicate that students endorse the theoretical goals of SWPBS more than they validate the effects of implementing SWPBS. The survey responses also indicate that younger students are more satisfied with their school experience than older students. An analysis of the psychometric properties of the ABC and SVI indicate that they are both sensitive measures. However, the SVI lacks internal consistency and the student responses are not easily categorized in a meaningful way that is consistent with the underlying theories of social validity and SWPBS. Finally, the data revealed a statistically significant trend that as elements of intervention move from theory to practice, they are progressively endorsed less.

# DISCUSSION

Positive Behavior Interventions and Supports initially deviated from traditional Applied Behavior Analysis principles and practices for moral reasons. The goal of PBS has been to create a behavior science that focused on human dignity, self-determination, and the normalization of individuals with disabilities (Singer & Wang, 2009). Because Schoolwide Positive Behavior Support is an outgrowth of PBS, it too should share this agenda. An important concept associated with the promotion of human dignity and self-determination is social validity, which broadly defined is the extent to which an intervention is acceptable and meaningful to those involved (J. E. Carr, et al., 1999; Wolf, 1978). Researchers associated with the implementation of SWPBS have not evaluated this concept. In response to this gap in the research literature, this study examined the social validity of SWPBS in two ways: first by asking students, who are the primary recipients of SWPBS interventions and efforts, concerning their perceptions of the social validity of SWPBS and second by assessing two instruments, the ABC and the SVI, that may help assess the social validity of SWPBS in the future.

The major findings from this study are presented hereafter in the order that the research questions have been presented previously. Some of the research questions did not produce any major findings and thus do not merit further discussion beyond that provided in the Results section.

Research Question 1

The results of the SVI and the ABC revealed that students' overall endorsement of the social validity of SWPBS was nearly 90%. Without any established standards for determining if an intervention is socially valid or not, it would appear that 90% endorsement constitutes a strong endorsement of the social validity of SWPBS. It would appear that, generally speaking, students find SWPBS to be acceptable and meaningful. While the social validity of SWPBS in schools surveyed in this study appears to be generally well established, there is also some meaningful variability among the various components of social validity and SWPBS and across individual items used in this study.

Students consistently endorsed the importance of having rules (99%) and knowing the rules (98.1%). Rather than being resistant to rules, as some might expect, students from kindergarten through ninth grade seem to appreciate their importance to the successful functioning of a school. Students may find the structure that rules provide important because it helps to make school a safe and predictable place to be. For students that come from chaotic home lives, the social validity of having and knowing rules may be particularly important.

A more surprising finding of the student surveys is that students did not overwhelmingly endorse the importance of being rewarded for following the rules (84.8%). Students endorsed 7 of the 11 questions at 90% or higher and yet they did not endorse the need for rewards at similar levels, even when the rewards are given specifically for doing the right thing. More than 15% maintained that no reward would be needed for following the rules. In the context of the matrix, 15% of students rejected the Goal of Rewarding Expectations. This sentiment could be a reflection of the value that

some place on moral obligation or the idea that one should comply with school rules because it is the right thing and for no other reason. Other students may have been taught to espouse a model of intrinsic reinforcement, which suggests that meeting the schoolwide expectations should produce an internal experience that is sufficiently reinforcing to make the behavior worthwhile. In either case, it is noteworthy that reinforcing appropriate compliance with schoolwide expectations may not be reinforcing for a sizable minority of school populations. It would be meaningful to know if the students that did not endorse the importance of rewards had received rewards throughout the school year, as their responses may have been a reaction to not having been rewarded.

The most striking perception that students expressed in the SVI is that when a student "gets in trouble," the corrective consequences that are administered did not result in a change of behavior. Over a third of the respondents did not believe that student behavior changed as a consequence of "getting in trouble." In the context of the Social Validity/SWPBS matrix, this result suggests that 34.3% of student respondents reject the Effects of Correcting Behaviors. More simply put, they did not see that the behavior correction efforts that were in place effectively changed student behavior. This perception is important because it may have at least three negative consequences. First, if student A reports student B for inappropriate behavior and after a correction procedure student A does not perceive that student B's behavior has changed, student A may be less likely to report future inappropriate behavior. If students come to believe that their own policing of behavior is ineffectual, the school may lose the social leverage that is a key component of good behavior management. A second potentially negative effect could occur if student A is engaging in inappropriate behavior that directly threatens or injures student

B. If student B reports the behavior in hopes of securing his own safety and perceives that he is threatened or injured again by student A, then student B may come to believe that school is not a safe place. A third and most obvious possible negative consequence occurs if student A repeatedly engages in inappropriate behavior believing that the school does not have the necessary tools to curb the behavior. In any case, it is noteworthy that many students do not believe that the behavior correction efforts in use in their schools have been effective. This perception could be a function of behavior correction efforts actually being ineffective or related to delays that often occur between behavior correction procedures and change in behavior. This perception may also signal a need to focus more heavily on other components of SWPBS so there is less need to correct behavior and to assure that behavior correction is more potent.

Data provided in Table 4 reveal an interesting trend in the student endorsement of the social validity of SWPBS. This table reports mean scores by component, for both the components of social validity (Goals, Procedures, and Effects) and the components of SWPBS (Establish Expectations, Teach Expectations, Reinforce Expectations, and Correct Errors). It highlights a statically significant trend among students to endorse more frequently those components of social validity and SWPBS that are more theoretical and to endorse less frequently those components that are more practical. Students are in favor of the idea of improving behavior management but when improving behavior management results in consequences that actually effect students' daily lives, they are not as supportive. These sentiments may be indicative of a greater trend among individuals to agree with the idea of behavior change while rejecting the procedures that

affect behavior change or the final result of the behavior change effort. This trend is described in greater detail in the paragraphs that follow.

In general terms, Table 4 shows that as one moves from left to right along the X-axis, which represents the components of SWPBS, students endorse SWPBS progressively less. It is also noteworthy that these components are often implemented chronologically as listed in the matrix. Students are rarely involved in the process of establishing schoolwide expectations. Rather, teachers, assistants, administrators, and sometimes parents hold meetings in which the expectations are established. So, the apparent impact of Establishing Expectations is minimal for students; for them, this component is largely theoretical. The next component, Teaching Expectations, has some greater impact on students' lives in that they often participate in schoolwide assemblies, classroom discussions, practice sessions, and other activities intended to teach the expectations. These activities typically occur at the beginning of the year and perhaps intermittently throughout the year. Students likely perceive that this component has a greater direct impact on their lives but the impact is rather infrequent. The Reinforcing Expectations component begins to impact students more frequently and more directly. Many of the Utah schools that implement SWPBS use the Principal's 200 Club, which is a schoolwide intervention that encourages teachers to recognize students that are demonstrating the established expectations. This recognition comes in the form of verbal praise, public posting of the student's name, a tangible reward, an opportunity to earn a larger reward, and in some cases, a call home to recognize the student's achievement. Teachers are encouraged to recognize students in this way multiple times a day. Moreover, those students who have not been recognized see the names of those students

who have been recognized on a daily basis and sometimes they hear the names of the recognized students announced over the intercom. With all of these activities taking place daily in a school, students likely perceive that this component has greater impact on their lives than the components mentioned previously because they are regularly reinforced for exhibiting the established behaviors. Finally, the Correct Errors component of SWPBS requires that teachers regularly identify behavior that is inconsistent with the established expectations and correct those students engaging in such behavior. This procedure could and often does occur multiple times in a single day for a single student. Consequently, students could perceive this component as having the greatest impact on their daily lives. In summary, students endorse social validity of those components that are perceived to be more theoretical or less influential in their lives at higher rates than those components that are perceived to be more practical or more influential in their lives.

This pattern repeats itself on the Y-axis of the matrix. At the top of the matrix is the social validity component called *Goals*. This is the component of social validity that was most frequently endorsed at 93.8%. This component answers the question, "Is the proposed outcome of the intervention acceptable?" This aspect of social validity is theoretical because it is asked before any intervention is used. Moreover, it has no direct impact on anyone that is directly involved in the intervention.

At the bottom of the Y-axis is the Effects component of social validity, which was the least frequently endorsed component (83.3%). This component answers the question, "Are the actual outcomes of this intervention acceptable?" This aspect of social validity

is the most practical because it addresses the physical, emotional, and behavioral realities that are the result of the intervention.

In between the Goals component and the Effects component is the Procedures component. It is noteworthy that this component falls between the other two in terms of how frequently is was endorsed at 90.7%. This component answers the question, "Are the means of reaching the desired outcome acceptable?"

The tendency among students to endorse the practical components of SWPBS less than the theoretical components casts some doubt on the social validity of the practices that are utilized as part of the SWPBS effort. This trend may be an artifact of behavior interventions in general: that people tend to endorse the idea of changing behavior but are less enthusiastic about the procedures and outcomes of behavior change efforts. Or it may be that SWPBS is a good idea that is not being executed very well. In either case, this trend suggest that more attention needs to be paid to the practices that are utilized within the SWPBS framework.

## Research Question 3

Data from the ABC Student survey revealed a significant negative correlation between grade and school satisfaction ($r = -.368$, $p<.001$) among the students surveyed, suggesting that older students are more dissatisfied with their schools experience. This finding could be explained as an artifact of maturation or as a typical attitude of adolescent students. However, this explanation would reject the concept of social validity all together. As mentioned previously, developing and using interventions that are socially valid ensures their survival, which is especially important for interventions that are demonstrated to effectively change behavior and improves the lives of those involved.

With this in mind, it is worth considering how SWPBS might be modified to improve middle school students' perceptions of their school experience. Consistent with PBS principles, this effort might focus on increasing the self-determination of middle school students as it relates to behavior management and on providing feedback to students in a way that maintains human dignity.

While the negative correlation between grade and school satisfaction exists, a visual analysis of the data indicates that kindergarten students are not the most satisfied students. In fact, the kindergarten students endorsed lower school satisfaction than first, second, and third grade students. The lower school satisfaction among kindergarten students in schools where SWPBS is being implemented could be the result of lack of exposure to and familiarity with the school and the SWPBS systems that are being used in the participating schools.

The ABC Student Survey has some promising psychometric characteristics as a measure of general consumer satisfaction. A Cronbach's Alpha was used to assess the internal consistency of the ABC. A score of 1.00 represents complete internal consistency and a score of 0.00 represents no internal consistency at all. This analysis produced a score of .70. Within the social sciences, an internal consistency of .70 or better is considered acceptable (Nunnally, 1978). To provide some context for this score, Finn and Sladeczek (2001) analyzed nine instruments designed to assess the social validity of individual behavior interventions. The internal consistency of these measures fell between .75 and .97. Using this as a standard for judging measures of social validity, it is clear that the ABC is less internally consistent than other measures. However, when considering that there are currently no widely accepted measures for assessing consumer

satisfaction with SWPBS from the student perspective, the internal consistency of the ABC represents a promising initial attempt at assessing the general construct of social validity. The measures of the distribution of scores (skewness and kurtosis) for the ABC fell within the normal range. These results lend greater support to the usefulness of the ABC as a measurement tool. In summary, the ABC demonstrated acceptable psychometric properties in terms of sensitivity, internal consistency, and distribution of scores and represents a promising start to measuring the general construct of consumer satisfaction with SWPBS from the student perspective.

## Research Question 4

This study revealed that the SVI has several satisfactory psychometric properties and some psychometric properties that need to be improved if it is to be a meaningful and useful measure. The SVI is a sensitive measure as indicated by the analyses reported previously. Results indicate that it is able to distinguish differences between schools and grades. The SVI also has good construct validity in that it is firmly grounded in social validity theory and SWPBS practice and comprehensively addresses all of the components included therein. The most pronounced psychometric deficiency of the SVI concerns its internal consistency. A Cronbach's Alpha score of .236 suggests that while the SVI is measuring something, it is not likely measuring the unified construct of social validity. The factor analysis conducted on the SVI also leads one to question its psychometric soundness. The principal component analysis that was conducted divided the responses into four distinct factors. These factors do not seem to logically fit with the components of social validity or the components of SWPBS and do not seem to group in any theoretically or practically meaningful way. The results of the psychometric analyses

indicate that the current iteration of the SVI is inadequate as a measure of the components of social validity as they relate to SWPBS. Further work and research are required if the SVI is to become a useful and meaningful tool.

## Limitations

There are several limitations to this study. The SVI was conducted with a relatively small sample size, 15 students per school ($n$ = 105), and the results may not be indicative of the greater school population. A greater sample size would allow the researcher to make more definitive statements about the social validity of SWPBS. Another limitation to this study is the psychometric properties of the SVI. Given the low internal consistency (Cronbach's Alpha = .236), it is not clear how the survey measures the unified concept of social validity. Moreover, the factor analysis of the responses did not indicate that items fell neatly into the components indicated on the matrix. Consequently, statements made previously that are based on the SVI results require closer scrutiny and should be interpreted with a degree of caution.

## Future Research

While this study was a good first step in understanding the social validity of SWPBS from the student perspective, many important questions remain unanswered. Future research in this area may focus on comparing schools in which SWPBS has been implemented to those schools that have not implemented SWPBS to provide a comparative sample of consumer satisfaction. Future research may focus on developing more refined and useful instruments for measuring the social validity of SWPBS. Future

efforts may also focus on establishing standards for establishing social validity and a relationship between social validity and effectiveness of interventions. Generally speaking, more effort and attention needs to be paid to understanding the social validity of SWPBS from the students' perspective so that SWPBS can adhere to its moral roots of promoting self-determination and human dignity.

# APPENDIX A

## ACADEMICS, BEHAVIOR AND COACHING

## STUDENT SURVEY

# ABC Student Survey

***Circle one:***

Grade: 1 2 3 4 5 6 7 8 9

Gender: Boy Girl

| ***Directions: Put an X in the Yes or No box.*** | **YES** | **NO** |
|---|---|---|
| I like school. | | |
| I know the school rules. | | |
| I have been rewarded for following the school rules. | | |
| I feel safe at recess. | | |
| I like my teachers. | | |
| My teachers like me. | | |
| If I get in trouble, my teacher is fair. | | |
| Sometimes, I am scared at school. | | |
| Other kids are nice to me. | | |
| School is a good place to be. | | |

My favorite thing about my school is:

My least favorite about my school is:

# APPENDIX B

# ACADEMICS, BEHAVIOR AND COACHING – UTAH'S BEHAVIOR INITATIVE SOCIAL VALDITY INTERVIEW

# ABC-UBI Social Validity Interview

School Name:_____

Circle: Male Female

Please write grade:

| Y= Yes, N=No | Y | N |
|---|---|---|
| Is it important to have school rules? | | |
| Are your school rules fair? | | |
| Should you and your friends know the school rules? | | |
| Did you like how your teacher taught the rules? | | |
| Should you and your friends be rewarded for following the rules? | | |
| Do you like the reward system? | | |
| Are you and your friends excited to participate in the reward system? | | |
| Should kids get in trouble when they break the rules? | | |
| After kids get in trouble, do they follow the rules? | | |

REFERENCES


Baer, D. M., Wolf, M. M., & Risley, T. R. (1968). Some current dimensions of applied behavior analysis. *Journal of Applied Behavior Analysis, 1*(1), 91-97.

Bohanon, H., Fenning, P., Carney, K. L., Minnis-Kim, M. J., Anderson-Harriss, S., Moroz, K. B., et al. (2006). Schoolwide application of positive behavior support in an urban high school. *Journal of Positive Behavior Interventions,* 8(3), 131-145.

Carr, E. G., Horner, R. H., Turnbull, A. P., Marquis, J. G., McLaughlin, D. M., McAtee, M. L., et al. (1999). *Positive behavior support for people with developmental disabilities: A research synthesis*. Washington, DC: American Association on Mental Retardation.

Carr, J. E., Austin, J. L., Britton, L. N., Kellum, K. K., & Bailey, J. S. (1999). An assessment of social validity trends in applied behavior analysis. *Behavioral Interventions, 14*(4), 223-231.

Corte, H. E., Wolf, M. M., & Locke, B. J. (1971). A comparison of procedures for eliminating self-injurious behavior of retarded adolescents. *Journal of Applied Behavior Analysis, 4*(3), 201-213.

Crone, D. A., Hoerner, R. H., & Hawken, L. S. (2004). *Responding to problem behaviors in the schools; the behavior education program*. New York, NY: Guilford Press.

Dalrymple, N., & Indiana Univ, B. I. R. C. f. A. (1993). *Competencies for people teaching individuals with autism and other pervasive developmental disorders.* (3rd ed.). Bloomington Indiana: Indiana Resource Center for Autism, Indiana University.

Dorsey, M. F., Iwata, B. A., Ong, P., & McSween, T. E. (1980). Treatment of self-injurious behavior using a water mist: Initial response suppression and generalization. *Journal of Applied Behavior Analysis, 13*(2), 343-353.

Finn, C. A., & Sladecdek, I. E. (2001). Assessing the social validity of behavior interventions: A review of treatment acceptability measures. *School Psychology Quarterly, 16*(2), 176-206.

Fister-Mulkey, S. L., & Kemp, K. A. (1995). One-minute skill builder video. Longmont, CO: Sporis West Inc.

Horner, R., & Sugai, G. (2009). Is school-wide positive behavior support an evidence-based practice? OSEP technical assistance center on positive behavioral interventions & supports effective schoolwide interventions. Retrieved October 15, 2010 from www.pbis.org/research/default.aspx

Jenson, W. R. (1985). Reduction of self-injurious behavior in an autistic girl using a multifaceted treatment program. *Journal of Behavior Therapy and Experimental Psychiatry, 16*(1), 77-80.

Jenson, W. R., Rode, G., Evans, C., & Morgan, D. P. (2006). *The tough kid: Principal's briefcase*. Longmont, CO: Sopris West

Kazdin, A. E. (1977). Assessing the clinical or applied importance of behavior change through social validation. *Behavior Modification, 1*(4), 427-452.

Kennedy, C. H. (1992). Trends in the measurement of social validity. *The Behavior Analyst, 15*(2), 147-156.

Miltenberger, R. G. (2004). *Behavior modification principles and procedures* (3rd ed.). Belmont, CA: Wadsworth/Thompson Learning.

Nelson, J. R., & Carr, G. A. (1999). *The think time strategy for schools* (2nd ed.). Longmont, CO: Sopris West.

Nunnally, J. C. (1978). *Psychometric theory*. NY: McGraw-Hill

Reavis, K. H., Sweeten, M. T., Jenson, W. R., Morgan, D. P., Andrews, D. J., & Fister, S. (1996). *Best practice behavioral and educational strategies for teachers*. Longmont, CO: Sopris West.

Rode, G., Jenson, W. R., & Reavis, K. H. (1993). *The tough kid book. Practical classroom management strategies*. Longmont, CO: Sopris West Inc.

Schwartz, I. S., & Baer, D. M. (1991). Social validity assessments: Is current practice state of the art? *Journal of Applied Behavior Analysis, 24*(2), 189-204.

Scott, T. M. (2007). Issues of personal dignity and social validity in schoolwide systems of positive behavior support. *Journal of Positive Behavior Interventions, 9*(2), 102-112.

Scott T. M., & Barrett, S. B. (2004). Using staff and student time engaged in disciplinary procedures to evaluate the impact of school-wide PBS. *Journal of Positive Behavior Interventions, 6*(1), 21-27.

Singer, G. H. S., Gert, B., & Koegel, R. L. (1999). A moral framework for analyzing the controversy over aversive behavioral interventions for people with severe mental retardation. *Journal of Positive Behavior Interventions, 1*(2), 88-100.

Singer, G. H. S., & Wang, M. (2009). The intellectual roots of positive behavior support and their implications for its development. In W. Sailor, G. Dunlop, G. Sugai, & R. Horner (Eds.), *Handbook of positive behavior support* (pp. 17-46). New York, NY: Springer Publishing Co.

Skinner, B. F. (1957). A functional analysis of verbal behavior. In B. F. Skinner (Ed.), *Verbal behavior* (pp. 1-12). East Norwalk, CT: Appleton-Century-Crofts.

Skinner, B. F. (1963). Operant behavior. *American Psychologist, 18*(8), 503-515.

Sprague, J. R., Colvin, G., & Irvin, L. K. (1995). *The Oregon school safety survey.* Unpublished manuscript, Eugene, OR.

Sugai, G., & Horner, R. (2002). The evolution of discipline practices: School-wide positive behavior supports. *Child & Family Behavior Therapy, 24*(1-2), 23-50.

Sugai, G., & Horner, R. H. (2009). Defining and describing schoolwide positive behavior support. In W. Sailor, G. Dunlop, G. Sugai, & R. Horner (Eds.), *Handbook of positive behavior support* (pp. 307-326). New York, NY: Springer Publishing Co.

Walker. H. M., Horner, R. M., Sugai, G., Bullis, M., Sprague, J. R., Bricker, D., Kaufman, M. J., (1996). Integrated approaches to preventing antisocial behavior patterns among school-aged children and youth. *Journal of Emotional and Behavioral Disorders, 4*(4), 194-209.

Wolf, M. M. (1978). Social validity: The case for subjective measurement or how applied behavior analysis is finding its heart. *Journal of Applied Behavior Analysis, 11*(2), 203-214.